



IFWO

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/810,262**

**DATE: 07/26/2004**  
**TIME: 14:42:58**

**Input Set : A:\67452029.app**  
**Output Set: N:\CRF4\07262004\J810262.raw**

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3 <110> APPLICANT: NAYLOR, STUART
4      KINGSMAN, SUSAN MARY
5      BINLEY, KATIE
7 <120> TITLE OF INVENTION: POLYNUCLEOTIDE CONSTRUCTS AND USES THEREOF
9 <130> FILE REFERENCE: 674523-2029.1
11 <140> CURRENT APPLICATION NUMBER: 10/810,262
12 <141> CURRENT FILING DATE: 2004-03-26
14 <150> PRIOR APPLICATION NUMBER: 09/787,562
15 <151> PRIOR FILING DATE: 2001-07-06
17 <150> PRIOR APPLICATION NUMBER: PCT/GB99/03181
18 <151> PRIOR FILING DATE: 1999-09-22
20 <150> PRIOR APPLICATION NUMBER: PCT/GB98/02885
21 <151> PRIOR FILING DATE: 1998-09-23
23 <150> PRIOR APPLICATION NUMBER: GB 9901906.9
24 <151> PRIOR FILING DATE: 1999-01-28
26 <150> PRIOR APPLICATION NUMBER: GB 9903538.8
27 <151> PRIOR FILING DATE: 1999-02-16
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63 cccatgtccc gcccctaact ccggccatcc cggccctaacc tccgcccagt tccggccatt 180
64 ctccggccca tcgctgacta attttttta tttatgcaga gcccgaggcc gcctcgccct 240

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80 gaaatgaccc tgtgccttat ttgaactaac caatcagtcc gcttctcgct tctgttcgct 180
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96 tgaccctgtg ctttatttga actaaccaat cagttcgctt ctcgcttctg ttcgcgcgt 180
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108 gccctgaaca gccccctgag cggcggcatg cgcgcacatca ggggcgtga cttccagtgc 180
109 ttccagcagg ccagggccgt gggctggcc ggcaccttcc ggccttcct gagcagccgc 240
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113 tgccccaga agagcgtgtc gcacggctcc gaccccaacg gccgcaggct gaccgagagc 480
114 tactgcgaga cctggcgac cggggccccc agcccacccg ggcaggccag ctccctgtc 540
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| 129 | atg   | gat        | gca          | atg | aag | aga | ggg | ctc | tgc | tgt | gtg | ctg | ctg | tgt | gga | 48  |     |
| 130 | Met   | Asp        | Ala          | Met | Lys | Arg | Gly | Leu | Cys | Cys | Val | Leu | Leu | Leu | Cys | Gly |     |
| 131 | 1     |            |              |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |     |     |
| 133 | gca   | gtc        | ttc          | gtt | tgc | ccc | agc | ggt | acc | gga | tcc | cac | agc | cac | cgc | gac | 96  |
| 134 | Ala   | Val        | Phe          | Val | Ser | Pro | Ser | Gly | Thr | Gly | Ser | His | Ser | His | Arg | Asp |     |
| 135 |       |            |              |     | 20  |     |     |     | 25  |     |     | 30  |     |     |     |     |     |
| 137 | ttc   | cag        | ccg          | gtg | ctc | cac | ctg | gtt | gcf | ctc | aat | agc | ccc | ctg | tca | ggc | 144 |
| 138 | Phe   | Gln        | Pro          | Val | Leu | His | Leu | Val | Ala | Leu | Asn | Ser | Pro | Leu | Ser | Gly |     |
| 139 |       |            |              |     | 35  |     |     |     | 40  |     |     | 45  |     |     |     |     |     |
| 141 | ggc   | atg        | cg           | ggc | atc | cgc | ggg | gcc | gac | ttc | cag | tgc | ttc | cag | cag | gcf | 192 |
| 142 | Gly   | Met        | Arg          | Gly | Ile | Arg | Gly | Ala | Asp | Phe | Gln | Cys | Phe | Gln | Gln | Ala |     |
| 143 |       |            |              |     | 50  |     |     |     | 55  |     |     | 60  |     |     |     |     |     |
| 145 | cgg   | gcc        | gtg          | ggg | ctg | gcf | ggc | acc | ttc | cgc | gcc | ttc | ctg | tcc | tcg | cgc | 240 |
| 146 | Arg   | Ala        | Val          | Gly | Leu | Ala | Gly | Thr | Phe | Arg | Ala | Phe | Leu | Ser | Ser | Arg |     |
| 147 | 65    |            |              |     | 70  |     |     |     | 75  |     |     | 80  |     |     |     |     |     |
| 149 | ctg   | cag        | gac          | ctg | tac | agc | atc | gtg | cgc | cgt | gcc | gac | cgc | gca | gcc | gtg | 288 |
| 150 | Leu   | Gln        | Asp          | Leu | Tyr | Ser | Ile | Val | Arg | Arg | Ala | Asp | Arg | Ala | Ala | Val |     |
| 151 |       |            |              |     | 85  |     |     |     | 90  |     |     | 95  |     |     |     |     |     |
| 153 | ccc   | atc        | gtc          | aac | ctc | aag | gac | gag | ctg | ctg | ttt | ccc | agc | tgg | gag | gct | 336 |
| 154 | Pro   | Ile        | Val          | Asn | Leu | Lys | Asp | Glu | Leu | Leu | Phe | Pro | Ser | Trp | Glu | Ala |     |
| 155 |       |            |              |     | 100 |     |     |     | 105 |     |     | 110 |     |     |     |     |     |
| 157 | ctg   | ttc        | tca          | ggc | tct | gag | ggt | ccg | ctg | aag | ccc | ggg | gca | cgc | atc | ttc | 384 |
| 158 | Leu   | Phe        | Ser          | Gly | Ser | Glu | Gly | Pro | Leu | Lys | Pro | Gly | Ala | Arg | Ile | Phe |     |
| 159 |       |            |              |     | 115 |     |     |     | 120 |     |     | 125 |     |     |     |     |     |
| 161 | tcc   | ttt        | gac          | ggc | aag | gac | gtc | ctg | agg | cac | ccc | acc | tgg | ccc | cag | aag | 432 |
| 162 | Ser   | Phe        | Asp          | Gly | Lys | Asp | Val | Leu | Arg | His | Pro | Thr | Trp | Pro | Gln | Lys |     |
| 163 |       |            |              |     | 130 |     |     |     | 135 |     |     | 140 |     |     |     |     |     |
| 165 | agc   | gtg        | tgg          | cat | ggc | tcg | gac | ccc | aac | ggg | cgc | agg | ctg | acc | gag | agc | 480 |
| 166 | Ser   | Val        | Trp          | His | Gly | Ser | Asp | Pro | Asn | Gly | Arg | Arg | Leu | Thr | Glu | Ser |     |
| 167 | 145   |            |              |     | 150 |     |     |     | 155 |     |     | 160 |     |     |     |     |     |
| 169 | tac   | tgt        | gag          | acg | tgg | cgg | acg | gag | gct | ccc | tcg | gcc | acg | ggc | cag | gcc | 528 |
| 170 | Tyr   | Cys        | Glu          | Thr | Trp | Arg | Thr | Glu | Ala | Pro | Ser | Ala | Thr | Gly | Gln | Ala |     |
| 171 |       |            |              |     | 165 |     |     |     | 170 |     |     | 175 |     |     |     |     |     |
| 173 | tcc   | tcg        | ctg          | ggg | ggc | agg | ctc | ctg | ggg | cag | agt | gcc | gcf | agc | tgc | 576 |     |
| 174 | Ser   | Ser        | Leu          | Leu | Gly | Gly | Arg | Leu | Leu | Gly | Gln | Ser | Ala | Ala | Ser | Cys |     |
| 175 |       |            |              |     | 180 |     |     |     | 185 |     |     | 190 |     |     |     |     |     |
| 177 | cat   | cac        | gcc          | tac | atc | gtg | ctc | tgc | att | gag | aac | agc | ttc | atg | act | gcc | 624 |
| 178 | His   | His        | Ala          | Tyr | Ile | Val | Leu | Cys | Ile | Glu | Asn | Ser | Phe | Met | Thr | Ala |     |
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| 182 | Ser   | Lys        |              |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
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| 193 | 1     |            |              |     | 5   |     |     |     | 10  |     |     | 15  |     |     |     |     |     |

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198 Phe Gln Pro Val Leu His Leu Val Ala Leu Asn Ser Pro Leu Ser Gly  
199 35 40 45  
201 Gly Met Arg Gly Ile Arg Gly Ala Asp Phe Gln Cys Phe Gln Gln Ala  
202 50 55 60  
204 Arg Ala Val Gly Leu Ala Gly Thr Phe Arg Ala Phe Leu Ser Ser Arg  
205 65 70 75 80  
207 Leu Gln Asp Leu Tyr Ser Ile Val Arg Arg Ala Asp Arg Ala Ala Val  
208 85 90 95  
210 Pro Ile Val Asn Leu Lys Asp Glu Leu Leu Phe Pro Ser Trp Glu Ala  
211 100 105 110  
213 Leu Phe Ser Gly Ser Glu Gly Pro Leu Lys Pro Gly Ala Arg Ile Phe  
214 115 120 125  
216 Ser Phe Asp Gly Lys Asp Val Leu Arg His Pro Thr Trp Pro Gln Lys  
217 130 135 140  
219 Ser Val Trp His Gly Ser Asp Pro Asn Gly Arg Arg Leu Thr Glu Ser  
220 145 150 155 160  
222 Tyr Cys Glu Thr Trp Arg Thr Glu Ala Pro Ser Ala Thr Gly Gln Ala  
223 165 170 175  
225 Ser Ser Leu Leu Gly Gly Arg Leu Leu Gly Gln Ser Ala Ala Ser Cys  
226 180 185 190  
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244 gccaacggca agaactacag gggcaccatg agcaagacca agaacggcat cacctgccag 180  
245 aagtggagca gcaccagccc ccacaggcct cgcttcagcc cggccaccca cccagcgag 240  
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248 atgcactgca gcggggagaa ctacgacgac aagatcagca agaccatgag cggcctggag 420  
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250 aacaagaacc tgaagaagaa ctattgtcgc aatcccgacc gcgagctgcg cccctggc 540  
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254 acccacaacc gcaccccgaa gaacttcccc tgcaagaacc tcgacgagaa ttattggcgg 780  
255 aaccctgacg gcaagaggc cccctggc cacaccacca acagccaggt ggcgtggag 840  
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 272 1 5 10 15  
 274 gca gtc ttc gtt tgc ccc agc ggt acc gga tcc tta ttt gaa aag aaa 96  
 275 Ala Val Phe Val Ser Pro Ser Gly Thr Gly Ser Leu Phe Glu Lys Lys  
 276 20 25 30  
 278 gtg tat ctc tca gag tgc aag act ggg aat gga aag aac tac aga ggg 144  
 279 Val Tyr Leu Ser Glu Cys Lys Thr Gly Asn Gly Lys Asn Tyr Arg Gly  
 280 35 40 45  
 282 acg atg tcc aaa aca aaa aat ggc atc acc tgt caa aaa tgg agt tcc 192  
 283 Thr Met Ser Lys Thr Lys Asn Gly Ile Thr Cys Gln Lys Trp Ser Ser  
 284 50 55 60  
 286 act tct ccc cac aga cct aga ttc tca cct gct aca cac ccc tca gag 240  
 287 Thr Ser Pro His Arg Pro Arg Phe Ser Pro Ala Thr His Pro Ser Glu  
 288 65 70 75 80  
 290 gga ctg gag gag aac tac tgc agg aat cca gac aac gat ccg cag ggg 288  
 291 Gly Leu Glu Glu Asn Tyr Cys Arg Asn Pro Asp Asn Asp Pro Gln Gly  
 292 85 90 95  
 294 ccc tgg tgc tat act act gat cca gaa aag aga tat gac tac tgc gac 336  
 295 Pro Trp Cys Tyr Thr Asp Pro Glu Lys Arg Tyr Asp Tyr Cys Asp  
 296 100 105 110  
 298 att ctt gag tgt gaa gag gaa tgt atg cat tgc agt gga gaa aac tat 384  
 299 Ile Leu Glu Cys Glu Glu Cys Met His Cys Ser Gly Glu Asn Tyr  
 300 115 120 125  
 302 gac ggc aaa att tcc aag acc atg tct gga ctg gaa tgc cag gcc tgg 432  
 303 Asp Gly Lys Ile Ser Lys Thr Met Ser Gly Leu Glu Cys Gln Ala Trp  
 304 130 135 140  
 306 gac tct cag agc cca cac gct cat gga tac att cct tcc aaa ttt cca 480  
 307 Asp Ser Gln Ser Pro His Ala His Gly Tyr Ile Pro Ser Lys Phe Pro  
 308 145 150 155 160  
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 312 165 170 175  
 314 cgg cct tgg tgt ttc acc acc gac ccc aac aag cgc tgg gaa ctt tgc 576  
 315 Arg Pro Trp Cys Phe Thr Thr Asp Pro Asn Lys Arg Trp Glu Leu Cys  
 316 180 185 190  
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 319 Asp Ile Pro Arg Cys Thr Thr Pro Pro Pro Ser Ser Gly Pro Thr Tyr  
 320 195 200 205  
 322 cag tgt ctg aag gga aca ggt gaa aac tat cgc ggg aat gtg gct gtt 672  
 323 Gln Cys Leu Lys Gly Thr Gly Glu Asn Tyr Arg Gly Asn Val Ala Val  
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**VERIFICATION SUMMARY**

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